

TransLink Management group

Contractor Report

11 December 2009

Items from previous meetings

Items carried over

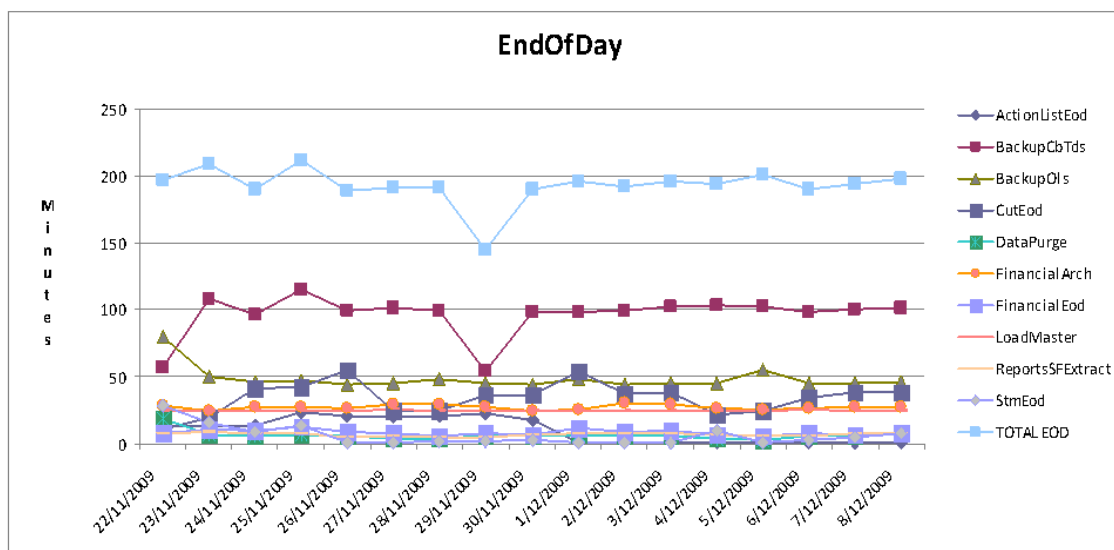
None

Items from the last meeting

1. End of Day Issue

The EOD process was interrupted on 06 November. Personnel monitoring the system found an issue with the UD Exporter. This process feeds data from the On Line Server to the Oracle Database Server. This process showed that it was functioning normally, however was not working. The processes were restarted On November 08. Backlog cleared by November 11.

Further actions were required, including optimizations of EOD and reporting. These included query optimization, reports optimizations and EOD process enhancements. EOD has been stable since mid-November.



2. Missed KPIs – October and November

Corrective action plan. Attachment 1.

Summary

Root Cause

Workflow modeling tools inadequate.

Inadequate reserve capacity in the call center.

Response to change too slow.

Not enough self help buffering in the system.

Corrective actions

Daily reporting. - *Implemented*

More resources. - *Implemented*
 Restructuring the work flow – *Initial changes made.*
 Adding work flow automation. – *Initial changes made.*
 Remaining actions to be part of the Preventative action plan.

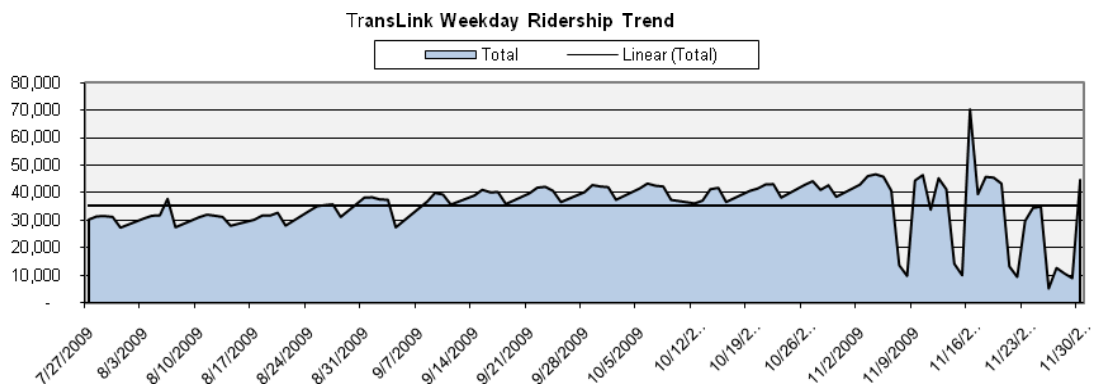
Preventive action

Model each of the work flows.
 Forecast resource requirements for each skill set
 Develop plans to provide for adequate staffing, a reserve capacity and emergency staffing.
 Preventative action plan – 1 February 2010
 Implement the plan – 1 April 2010

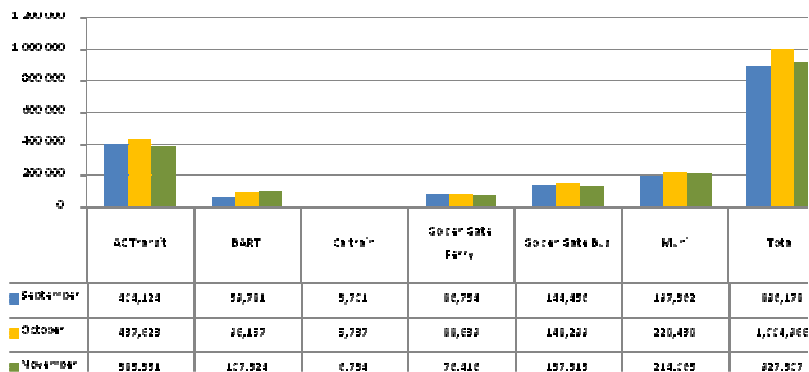
Operations

Current status

Volume increases were continuous through September. (~50%)
 Ridership flattened in October and November.



TransLink ridership



Ridership has held at nearly 1 million rides per month across the system, even with the Thanksgiving Holiday Weekend.

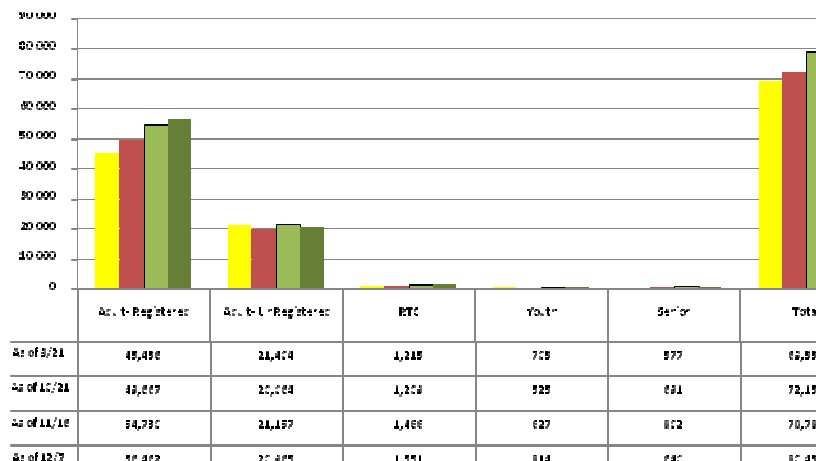
Total TransLink Sales volume by Channel

Sales Channel	Volume
Autoload	\$ 839,513.85
AVM	\$ 371,251.25
TOT	\$ 196,841.83
Institutional Programs	\$ 327,799.91
POS	\$ 577,427.00
Remote Add Value	\$ 165,719.13
Total	\$ 2.47 million

Sales for November over \$2.4 million.

This is just slightly less than the 2.56m in October.

Active Cards



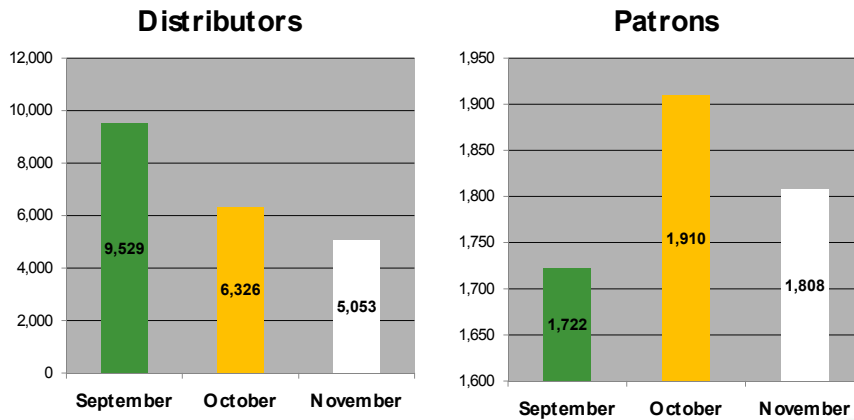
The number of active cards increased slightly as rides and monthly sales held stable.

Currently the average is 12 rides per month for each active card.

Active card in this slide is defined as a Card used or a Card not used in the last 365 days and has had an add value transaction in the last 365 days.



Cards Shipped (TLC011)



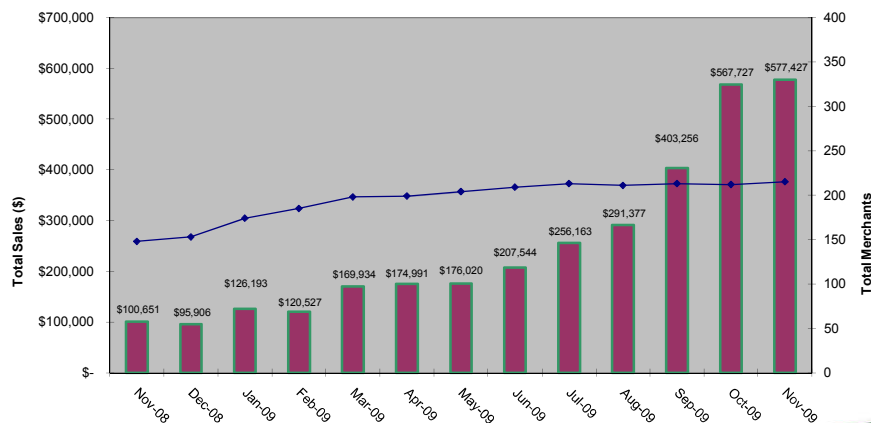
26,000 cards have been shipped in the last 3 months. With 80,000 active cards and a steadily growth in ridership it appears that patrons are becoming more habitual users.

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Smart Card. Smart Travel.



Total Sales vs. Total Merchants



The number of merchants in the network has stayed relatively stable. October's strong sales per distributor remained high in November.

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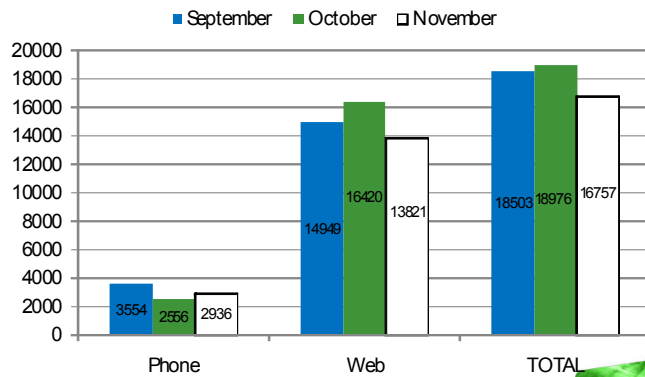
Smart Card. Smart Travel.



The increase in sales and rides did not translate into a corresponding increase in contacts. This would also seem to be consistent with the increased usage of the cards by habitual users. Much of the call volume is generated by new users, or specific events, and as patrons become more knowledgeable, the contacts begin to decrease



Pivotal Contacts (TLP012)



Pivotal contacts

July

Aug.

Sept.

Oct. - 18,976

Nov.

Beginning to decrease

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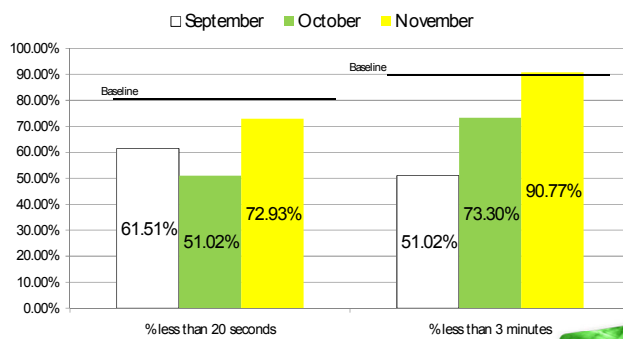
Smart Card. Smart Travel.



Patron call center performance



Speed of Answer (TLP012)



* Based on new contractual KPI

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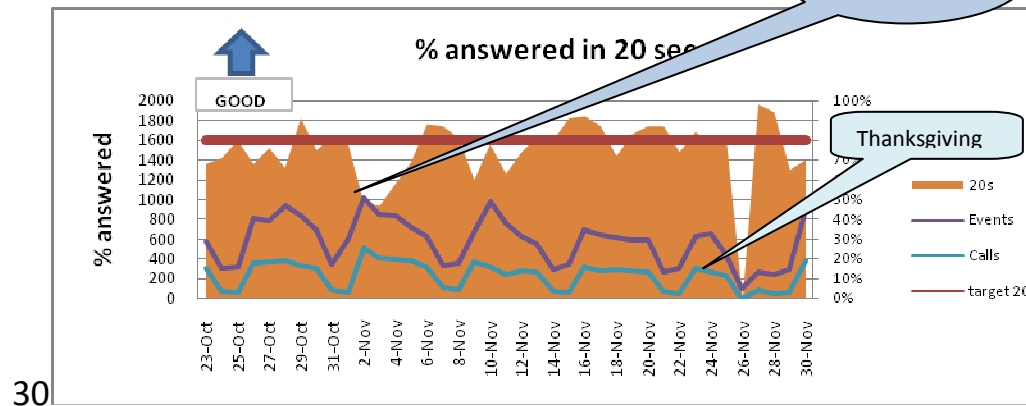
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November's speed of answer improved. The value is within requirements for answers within 3 minutes. The value for 20 seconds improved but is below requirements.

During the month we continued daily monitoring.

Patron call center performance – Through Nov.

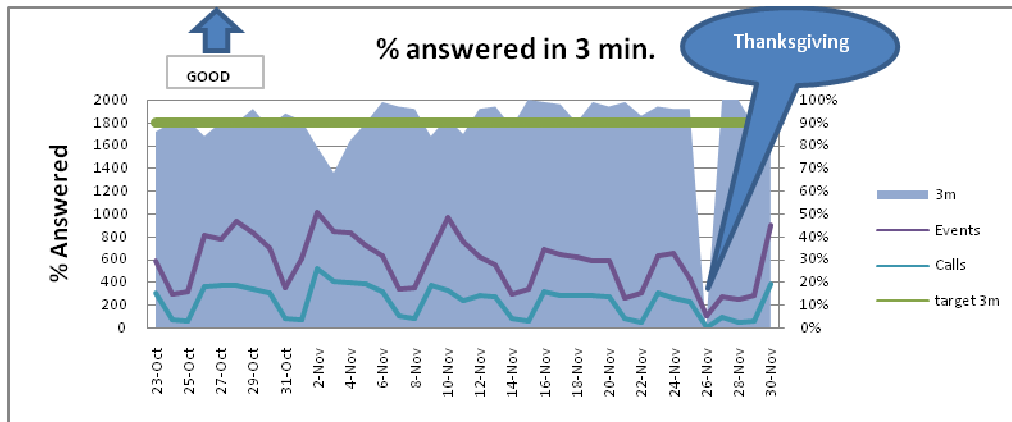


Beginning of month

Thanksgiving

% of calls answered in 20 seconds was recovering to acceptable levels at the end of October. A spike in volume at the beginning of November drove the % down again, recovering by the end of the first week. (We believe this is related to new monthly passes, and benefits downloads)

The rate dipped a few days in the last weeks but is generally improved with the addition of new labor and some enhanced tools.

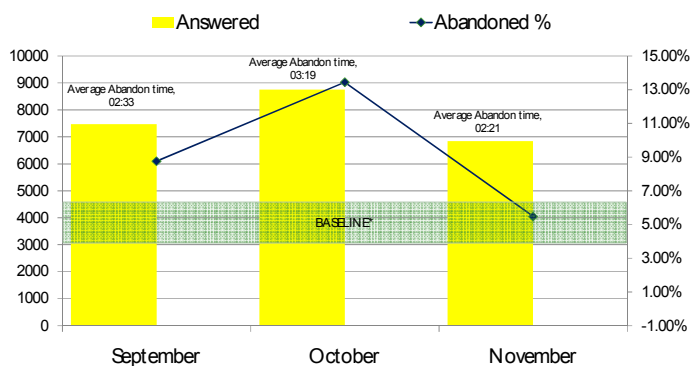


% of calls answered in 3 minutes had reached consistent acceptable levels at the end of October had a dip (along with 20 sec response) at the beginning of the month and has returned to acceptable levels since.

Patron call center performance – October



Incoming Call Data (TLP012)



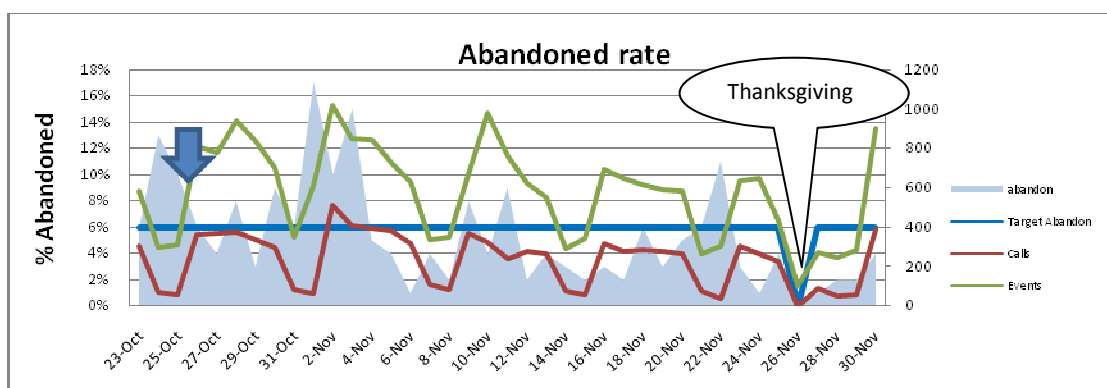
The abandoned rate for the month was drastically reduced, and falls within the KPI Baseline. This was the value we focused on most directly.

This metric has shown the most improvement over the last four weeks.

* Based on new contractual KPI

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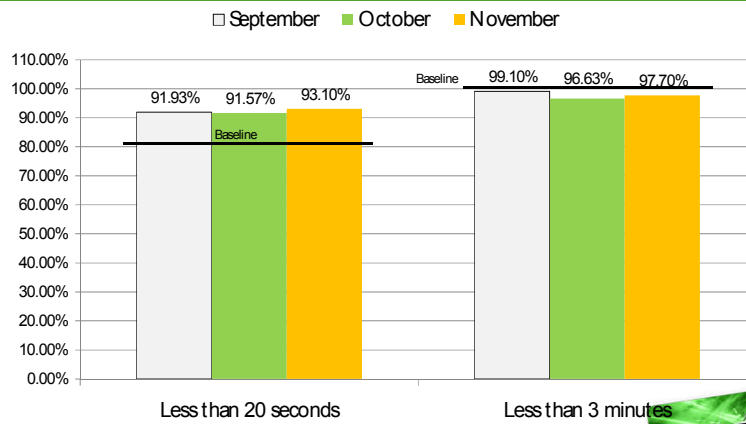
Smart Card. Smart Travel.



Operator help desk



Speed of Answer (TLP012)



The Answer rates at the operator help desk remain excellent. The 20 second rate is well over the target. The 3 minute rate is hovering around the 100% target.



How did services respond?

Operations Help Desk

Missed goal for response within 3 Minutes

-Goal 100%

-Actual 97.70%

Depot repairs

Continued to meet all KPIs

Patron Call Center

Calls answered within 20 sec.

- Goal 80%

- Actual 73%

Calls answered within 3 minutes

- Goal 90%

- Actual 97%

Calls abandoned

- Goal 6%

- Actual 5%

Card fulfillment

Card issuance – Replacement within 3 days

- Goal 95%

- Actual 91.11%

Percentage of refunds within 21 days

- Goal 98%

- Actual 93.18%

Hours to process a RAV

- Goal 12 - 24h

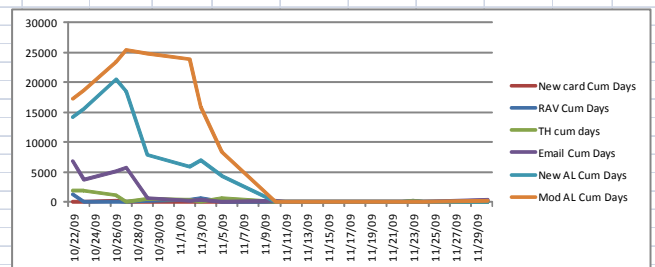
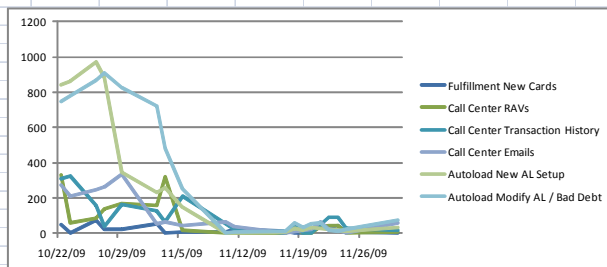
- Actual 20 hours

Transaction History requests processed in 72h

- Goal 95%

- Actual 91.52 %

As of:	Fulfillment New Cards			RAVs			Call Center Transaction History			Emails			New AL Setup			Autoload Modify AL / Bad Debt		
	Qty	Oldest	New card Cum Days	Qty	Oldest	RAV Cum Days	Qty	Oldest	TH cum days	Qty	Oldest	Email Cum Days	Qty	Oldest	New AL Cum Days	Qty	Oldest	Mod AL Cum Days
10/22/09	50	10/20/09	100	328	10/18/09	1312	308	10/16/09	1848	271	9/27/09	6775	840	10/5/09	14280	749	9/29/09	17227
10/23/09	0	10/22/09	0	59	10/22/09	59	327	10/17/09	1962	212	10/5/09	3816	865	10/5/09	15570	780	9/29/09	18720
10/26/09	76	10/23/09	228	86	10/25/09	86	159	10/19/09	1113	246	10/5/09	5166	974	10/5/09	20454	868	9/29/09	23436
10/27/09	24	10/26/09	24	136	10/26/09	136	40	10/26/09	40	262	10/5/09	5764	882	10/6/09	18522	910	9/29/09	25480
10/29/09	25	10/28/09	25	167	10/28/09	167	162	10/26/09	486	335	10/27/09	670	344	10/6/09	7912	829	9/29/09	24870
11/2/09	52	11/1/09	52	159	10/31/09	318	129	10/30/09	387	52	10/29/09	208	229	10/7/09	5954	723	9/30/09	23859
11/3/09	3	11/3/09	0	320	11/1/09	640	62	11/2/09	62	63	10/29/09	315	259	10/7/09	6993	483	10/1/09	15939
11/5/09	9	11/4/09	9	16	11/4/09	16	209	11/2/09	627	45	11/2/09	135	149	10/7/09	4321	252	10/3/09	8316
11/10/09	8	11/10/09	0	0	11/10/09	0	53	11/9/09	53	65	11/6/09	260	1	11/10/09	0	0	11/10/09	0
11/11/09	24	11/11/09	0	0	11/11/09	0	25	11/11/09	0	36	11/9/09	72	2	11/11/09	0	5	11/11/09	0
11/17/09	12	11/15/09	24	0	n/a	0	0	n/a	0	4	11/17/09	0	9	11/17/09	0	12	11/17/09	0
11/18/09	4	11/18/09	0	22	11/16/09	0	46	11/18/09	0			0	28	11/17/09	28	58	11/17/09	58
11/19/09	1	11/19/09	0	0	n/a	0	0	n/a	0	17	11/17/09	34	15	11/18/09	15	33	11/18/09	33
11/20/09	14	11/19/09	14	0	n/a	0	0	n/a	0	24	11/17/09	72	35	11/18/09	70	55	11/18/09	110
11/21/09	40	11/20/09	40	39	11/17/09	0	51	11/20/09	0	62	11/20/09	62			0	60	11/19/09	120
11/22/09	40	11/21/09	0	44	11/17/09	0	90	11/20/09	90	23	11/22/09	0			0	19	11/22/09	0
11/23/09	46	11/21/09	92	45	11/17/09	270	93	11/20/09	279	16	11/21/09	32	17	11/22/09	17	13	11/22/09	13
11/24/09	8	11/22/09	16	4	11/23/09	4	29	11/23/09	29	4	11/23/09	4	13	11/24/09	0	23	11/23/09	23
11/30/09	4	11/30/09	0	5	11/30/09	0	19	11/30/09	0	59	11/24/09	354	31	11/28/09	62	74	11/27/09	222
12/1/09	9	12/1/09	0	10	11/30/09	10	54	11/30/09	54	12	12/1/09	0	30	11/28/09	90	84	11/27/09	336



Those KPIs that were missed (20 sec, replacements in 3 days, refunds in 21 days and Transaction histories in 72 hours) were missed early in the month before all of the corrective actions were in place. The chart above shows that performance has stayed within acceptable levels since then.

**SIGNIFICANT****Corrective Action Request**

ISSUE DATE: 11/21/2009

RESPONSE DUE: 12/5/2009

RESPONSE SUBMITTED:

CAR NBR: 2429

DATE CLOSED:

STATUS: Awaiting Response

-- QA --	ASSIGNEE(S) Dave Lapczynski (PRIMARY)		SOURCE: Internal Finding	AUDIT NO.:
			DEPT : Patron Support Services	PROCESS REF:
			DESTINATION FACILITY: CON	
-- INITIATOR --	INITIATOR: Alison Holland Bodero		CONTRACT LETTER #:	PART NO.:
	ORIGIN FACILITY: CON		CUSTOMER: NONE	PROJ NO.:
	FINDING The TSB has not been meeting their KPI objects for the months of September 2009 and October 2009. Attached please find the Operations Performance Report and the Cardholder Support Service Performance Level Standards reports for the reporting months of September and October 2009.			
QA	QA COMMENTS TO ASSIGNEE:			
ASSIGNEE	ROOT CAUSE		CAUSE TYPE: TBD	
-- ASSIGNEE --	CORRECTIVE ACTION		REQUIRES VERIFICATION:	ORIGINAL IMPLEMENTATION DATE: CURRENT IMPLEMENTATION DATE:
-- ASSIGNEE --	PREVENTATIVE ACTION		REQUIRES VERIFICATION:	ORIGINAL IMPLEMENTATION DATE: CURRENT IMPLEMENTATION DATE:
-- AUDITOR --	CORRECTIVE AND/OR PREVENTATIVE ACTION SUBMITTED BY:		DATE SUBMITTED:	
	SR MGMT APPROVED BY:		DATE APPROVED:	
	CORRECTIVE FOLLOW-UP RESULTS FOLLOW-UP PERFORMED BY:			
			DATE :	



Card Holder Support Service Performance Level Standards

TRANS LINK

Report Run for 9/1/2009 through 9/30/2009

KPI	KPI Description	KPI Value	Below Base	Base	Above Base
I.	Percent of Telephone calls answered by live agent within 20 seconds	62.39%	< 80%	80-90%	> 90%
II.	Percent of Telephone calls voluntarily abandoned by caller	8.69%	>6%	4-6%	< 4%
III.	Percent of Telephone calls answered within 3 minutes	65.42%	< 90%	90-98%	> 98%
IV.	Average number of days to fill request for new card	3.18	> 5	2 - 5	< 2
V.	Percent of requests for replacement card filled within 3 business days	74.58%	< 95%	95-98%	> 98%
VI.	Average number of hours to process Remote Add Value requests	53.59	> 24	12 - 24	< 12
VII.	Percent of transaction history requests processed within 3 business days	8.86%	< 95%	95-98%	> 98%
VIII.	Percent of card value refunds processed filled within 21 business days	97.14%	< 98%	98-99.5%	> 99.5%
IX.	Percent that the website homepage is available	99.95%	< 99%	99-99.73%	> 99.73%
X.	Percent of email contacts acted upon within 24 hours	TBD	< 90%	90-98%	> 98%
XI.	Percent of calls resolved on the first call	80.42%	< 65%	65-80%	> 80%
XII.	Customer Satisfaction	TBD	< 65%	65-80%	> 80%



Card Holder Support Service Performance Level Standards

TRANS LINK

Report Run for 10/1/2009 through 10/31/2009

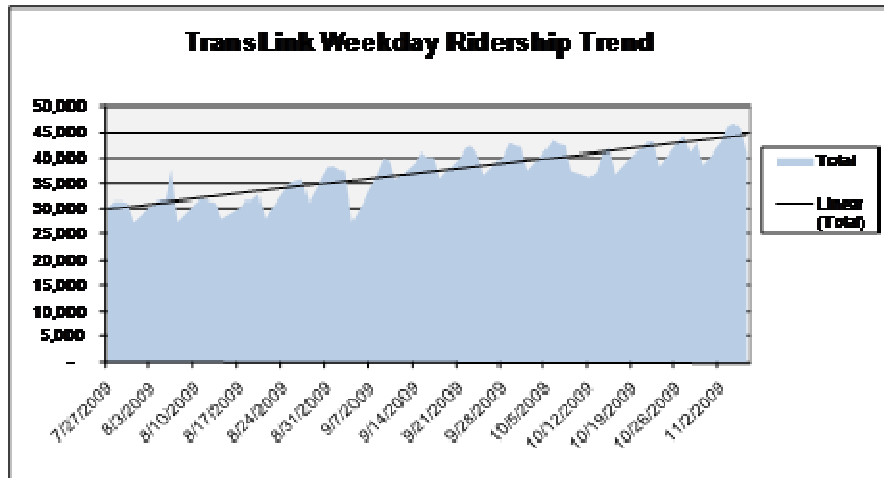
KPI	KPI Description	KPI Value	Below Base	Base	Above Base
I.	Percent of Telephone calls answered by live agent within 20 seconds	51.83%	< 80%	80-90%	> 90%
II.	Percent of Telephone calls voluntarily abandoned by caller	13.33%	>6%	4-6%	< 4%
III.	Percent of Telephone calls answered within 3 minutes	73.78%	< 90%	90-98%	> 98%
IV.	Average number of days to fill request for new card	3.57	> 5	2 - 5	< 2
V.	Percent of requests for replacement card filled within 3 business days	71.54%	< 95%	95-98%	> 98%
VI.	Average number of hours to process Remote Add Value requests	88.29	> 24	12 - 24	< 12
VII.	Percent of transaction history requests processed within 3 business days	24.10%	< 95%	95-98%	> 98%
VIII.	Percent of card value refunds processed filled within 21 business days	62.31%	< 98%	98-99.5%	> 99.5%
IX.	Percent that the website homepage is available	98.80%	< 99%	99-99.73%	> 99.73%
X.	Percent of email contacts acted upon within 24 hours	TBD	< 90%	90-98%	> 98%
XI.	Percent of calls resolved on the first call	77.06%	< 65%	65-80%	> 80%
XII.	Customer Satisfaction	TBD	< 65%	65-80%	> 80%

Expansion of the finding:

The KPIS that were missed fall into two categories. The KPIs related to the performance of the patron call center (KPIs 1,2,3 above), and those related to back office services (5,6,7,8)

The KPIS were missed for two consecutive months (September and October 2009)

These KPIs had been consistently achieved in previous months.



Ridership began a steep increase in August, over the intervening 3 months increasing by about 50%.

In July there were a little over 27,000 contacts with the call center. In August the contacts jumped to 36,000. In October there were 38,000. Indications are that the growth rate has slowed and November

will show a small increase in volume.

From preliminary observation it was clear that the drop in performance was directly related to an increase in volume. The lack of people is not, however, the root cause of the problem. It is a symptom. In addition, it is not enough to fix this problem well enough to simply meet the performance criteria. The system must be robust enough and have enough **reserve capacity** to be able to cope quickly with reasonable increases in volume.

Corrective Actions

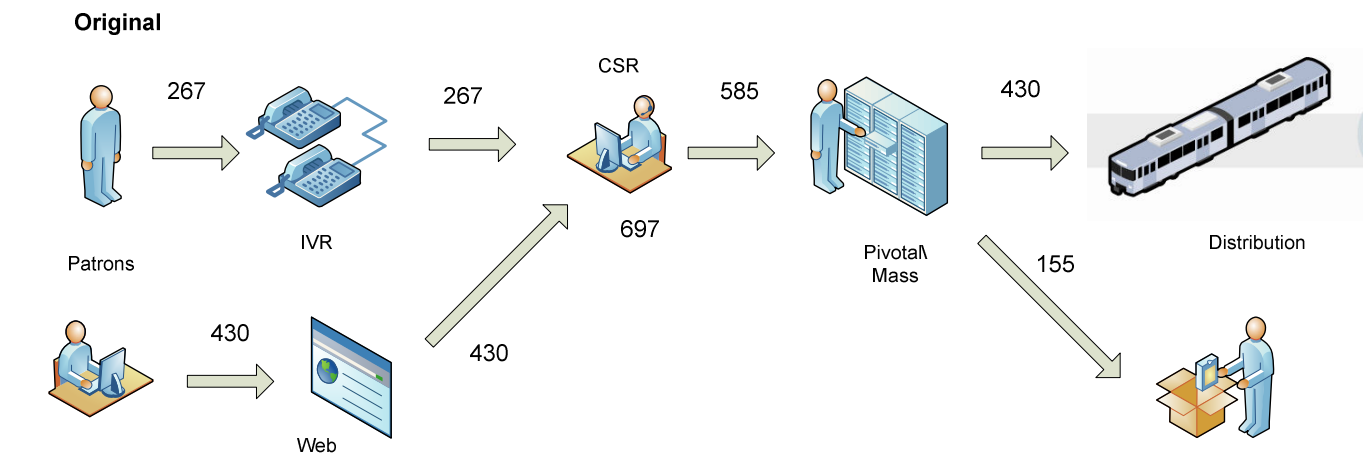
One of the first changes made when it became apparent that call volumes were increasing and performance was being challenged, was the creation of a daily report. Information from that source document will be presented throughout this document.

Call Center:	Today		Daily Avg last Month
Call Types	Total Events		Total Events
Autoload Issues	15	Autoload Issues	23
Card Registration	6	Card Registration	1
Financial Inquiry	21	Financial Inquiry	13
Lost/Stolen Card	20	Lost/Stolen Card	10
New Card Request	17	New Card Request	10
Web Account Maintenance	61	Web Account Maintenance	103
Web Autoload Setup	50	Web Autoload Setup	58
Web Card Registration	43	Web Card Registration	56
Web Modify Autoload	71	Web Modify Autoload	65
Web New Card Request	38	Web New Card Request	49
Web Remote Add Value	115	Web Remote Add Value	115
Web Transaction History Request	52	Web Transaction History Request	58
Others	76	Others	71
Total	585		632

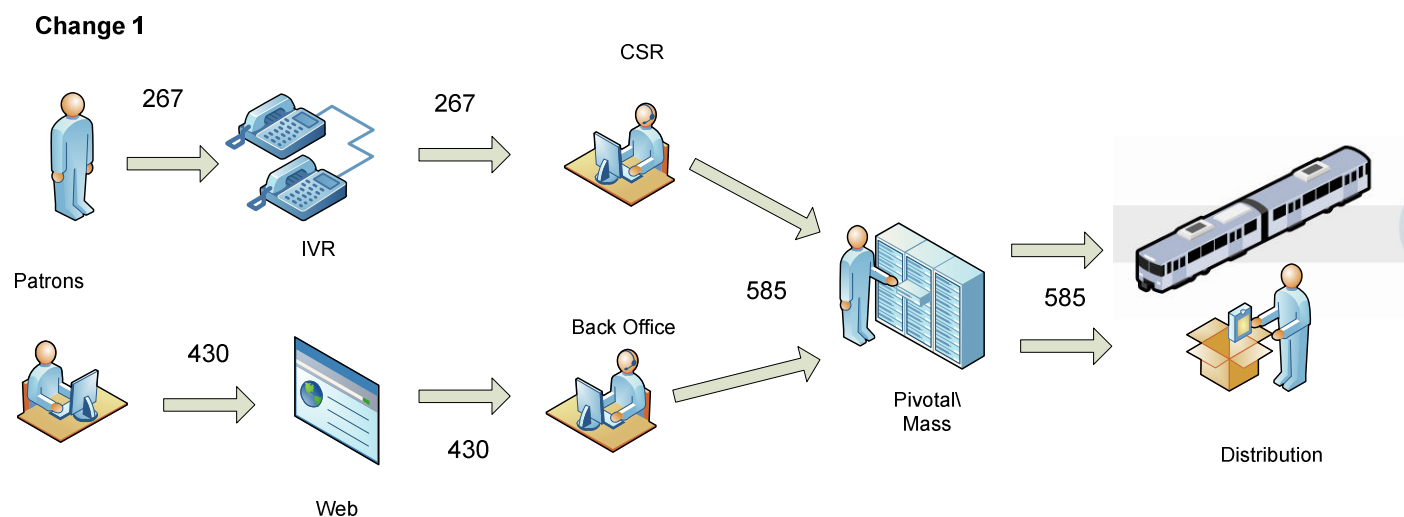
The inputs for 20 November are shown above. Because the IVR does not handle any significant number of calls before they are passed on to a CSR those numbers are not tracked. (This is a subject that will surface again later).

On that day 430 contacts came from web inputs. Because there is very little integration between the web and the central system, all of these inputs required a subsequent action by a Customer Service Representative to resolve.

There were also 267 calls handled by CSRs.

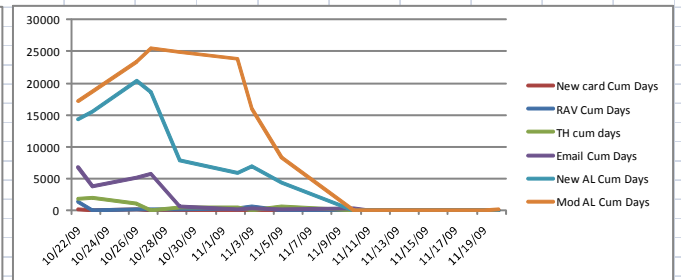
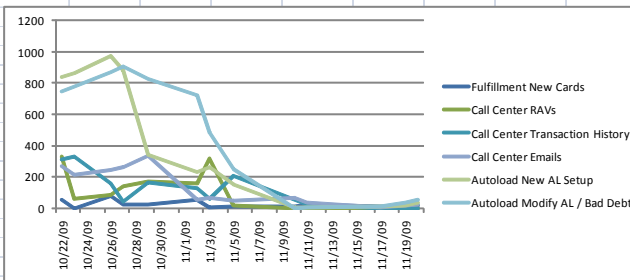


The obvious bottleneck in this flow is the CSR. As the volume of both the web inquiries and the calls increased the CSRs could not keep up. The first remedy was to increase the number of CSRs. While this was somewhat effective it did not address the fundamental issue, which was the funneling of all inputs through the CSRs. One of the reasons that simply adding labor was not effective is the difference between the two types of tasks. The web generated tasks can be done by people with some training and reasonable levels of supervision. The tasks are not real time, they can be scheduled at night or on weekends, and they have relatively long completion deadlines (hours and days). The CSR tasks are measured in seconds and minutes, they are real time, and the people answering the calls need a fairly high degree of training.

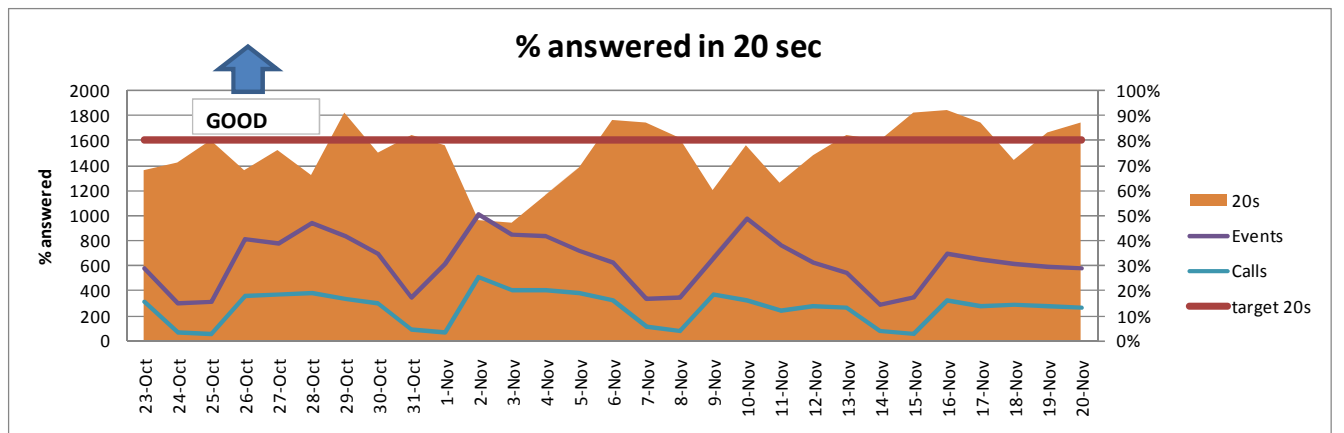
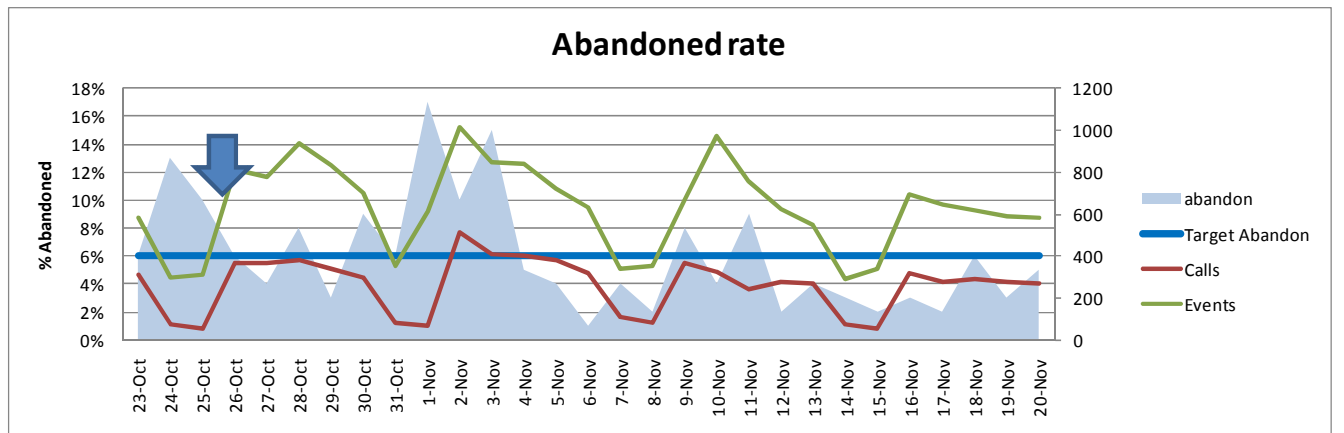


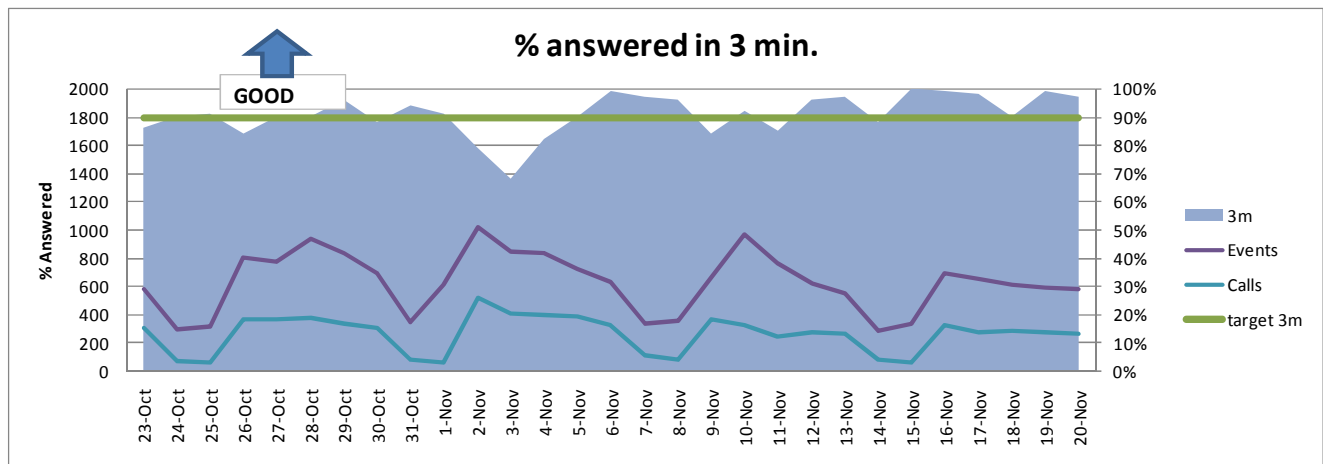
The first change in work flow directed the web inputs to a separate set of resources and away from the CSRs. When this was done the backlog of web requests began to diminish

	Fulfillment New Cards			RAVs			Transaction History			Emails			New AL Setup			Modify AL / Bad Debt		
	Qty	Oldest	New card Cum Days	Qty	Oldest	RAV Cum Days	Qty	Oldest	TH cum days	Qty	Oldest	Email Cum Days	Qty	Oldest	New AL Cum Days	Qty	Oldest	Mod AL Cum Days
Morning of:																		
10/22/09	50	10/20/09	100	328	10/18/09	1312	308	10/16/09	1848	271	9/27/09	6775	840	10/5/09	14280	749	9/29/09	17227
10/23/09	0	10/22/09	0	59	10/22/09	59	327	10/17/09	1962	212	10/5/09	3816	865	10/5/09	15570	780	9/29/09	18720
10/26/09	76	10/23/09	228	86	10/25/09	86	159	10/19/09	1113	246	10/5/09	5166	974	10/5/09	20454	868	9/29/09	23436
10/27/09	24	10/26/09	24	136	10/26/09	136	40	10/26/09	40	262	10/5/09	5764	882	10/6/09	18522	910	9/29/09	25480
10/29/09	25	10/28/09	25	167	10/28/09	167	162	10/26/09	486	335	10/27/09	670	344	10/6/09	7912	829	9/29/09	24870
11/2/09	52	11/1/09	52	159	10/31/09	318	129	10/30/09	387	52	10/29/09	208	229	10/7/09	5954	723	9/30/09	23859
11/3/09	3	11/3/09	0	320	11/1/09	640	62	11/2/09	62	63	10/29/09	315	259	10/7/09	6993	483	10/1/09	15939
11/5/09	9	11/4/09	9	16	11/4/09	16	209	11/2/09	627	45	11/2/09	135	149	10/7/09	4321	252	10/3/09	8316
11/10/09	8	11/10/09	0	0	11/10/09	0	53	11/9/09	53	65	11/6/09	260	1	11/10/09	0	0	11/10/09	0
11/11/09	24	11/11/09	0	0	11/11/09	0	25	11/11/09	0	36	11/9/09	72	2	11/11/09	0	5	11/11/09	0
11/17/09	12	11/15/09	24	0	11/17/09	0	0	11/17/09	0	4	11/17/09	0	9	11/17/09	0	12	11/17/09	0
11/19/09	1	11/19/09	0	0	11/19/09	0	0	11/19/09	0	17	11/17/09	34	15	11/18/09	15	33	11/18/09	33
11/20/09	14	11/19/09	14	0	11/20/09	0	0	11/20/09	0	24	11/17/09	72	35	11/18/09	70	55	11/18/09	110
																		0



and the CSR response times came in line.

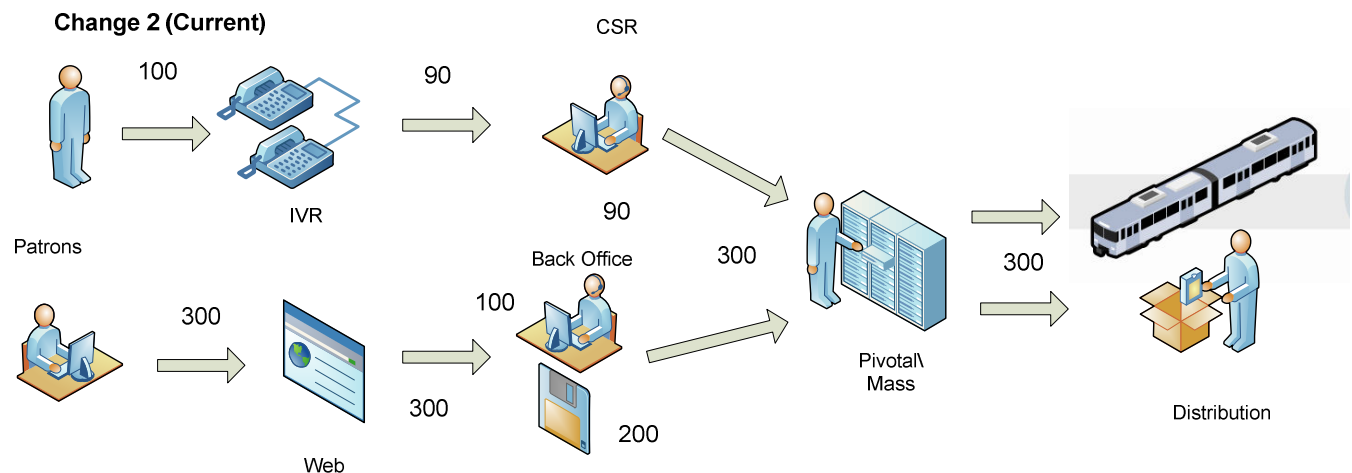




November values appear to all have come within acceptable levels.

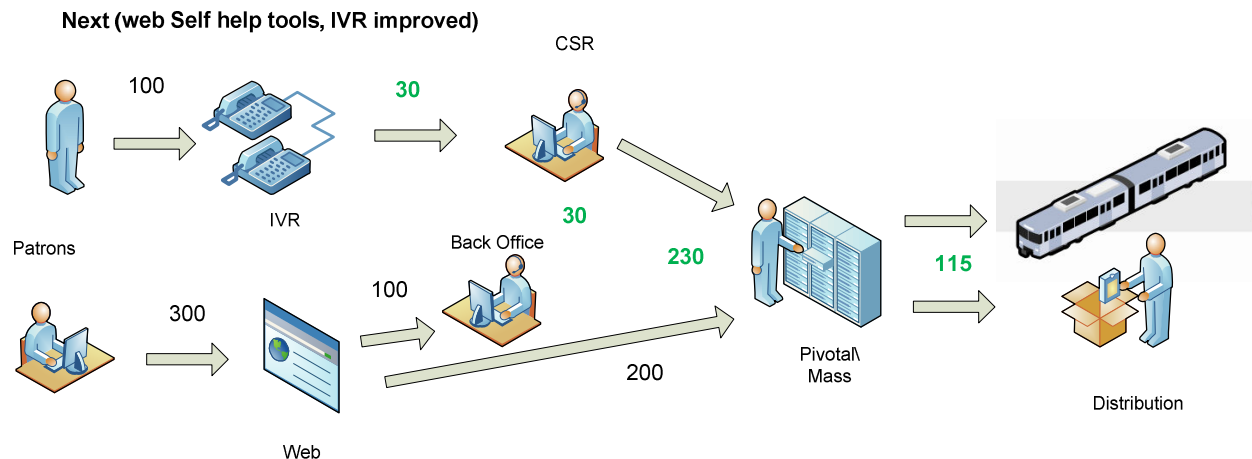
All of the capacity constraints were found in the call center. The system was able to accommodate the load, once it was presented with no difficulties.

Next actions (values in the chart are notional)



The next aim for developing reserve capacity is automating wherever possible the path from the web to the central system. We have currently implemented the use of some scripts to help automate several processes (including requests for transaction histories and RAVs). This will deepen the capacity of the

back office staff.



Finally, we will improve the capabilities of the IVR. Far fewer calls should make it to the CSRs. A target of 60 – 70% of the calls made should be handled by self-service. This dampens fluctuations in volume by a large percentage. This is a form of reserve capacity. We will also make the connections between the web and the central system direct and automatic. This will create a very deep reserve of capacity. This change also fundamentally varies the output from the system as well. Self service will include patrons printing their own transaction histories, and administering their own benefits.

Summary of Corrective actions:

- Daily reporting. - *Implemented*
- More resources. - *Implemented*
- Restructuring the work flow – *Initial changes made.*
- Adding work flow automation. – *Initial changes made.*
- Remaining actions to be part of the Preventative action plan.

Root Cause:

Workflow modeling tools inadequate.

- Inadequate reserve capacity in the call center.
- Response to change too slow.
- Not enough self help buffering in the system.

No management tool exists that models the number of calls, the hours of service, the effectiveness of the IVR, the flow of work from the web, and, given an assumed realization percentage, how many people are required achieve the target KPIs . Also, there has been little quantitative analysis of the effect of improved self-help tools on the ability to create reserve capacity in the system without increasing personnel. This led to staffing based on anecdotal and observational criteria, rather than analysis. It meant that there was no forecasting of load, capacity or reserve. This made the management slow to react. It also made it impossible to know how much additional resource was required.

Preventative Action:

Work flows and processes will be developed for all of the processes related to the subject KPIs. (Call center and fulfillment)

Calculations of load and capacity will be created for each process. The calculations will include a explicit assumptions about work distribution, normal variation, average times for all work elements, realization percentages, a target for reserve capacity (as a percentage) and reporting mechanisms to monitor current load and forecast future load. The capacity should be designed for the levels of activity that will be experienced when the system is mature.

Contingency plans should be prepared if required, to bring capacity on line quickly as volume grows.

The complexity of this task should not be underestimated. The table below represents the calls taken on an average weekday. Using 5 minutes per call as an average, 380 calls generate 1900 minutes of work. That is less than 32 man hours of work. The average number of CSRs working in a day is 9. That generates 72 hours of labor. That is a net realization percentage of 44%.

	CSR Calls	Avg. CSR Time/Call (HH:MM:SS)
Cardholder Support Queue		
Translink Cardholder English Queue	380	00:04:44
Translink Cardholder Spanish Queue	2	00:02:48
Translink Cardholder Mandarin Queue	1	00:08:16
sub-total/average	383	00:04:44

Not only is the realization percentage low, the call duration is too long. These are obviously related values. It is highly recommended that a simulation package be used to model the process.

Tasks:

Prepare a plan for implementing the Preventative action. – *Plan should be complete and accepted by 1 February 2010.*

Implement the plan. – *Plan must be implemented by April 1, 2010*